



Los Angeles County Chief Executive Office

Class Specification: GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST

ITEM NUMBER: 4416

APPROVAL DATE: 07/31/2012

DEFINITION:

Functions as technical expert and serves as project manager and/or technical team lead in design, development, testing, implementation and maintenance of large-scale County-wide and/or departmental Geographic Information Systems (GIS) applications, tools, backend processing modules and associated data layers and databases.

CLASSIFICATION STANDARDS:

Positions allocable to this specialist level professional class serve as project managers and/or technical team leads for highly complex GIS applications and data management projects. Incumbents are accountable for working collaboratively with customers and project team members to develop and manage projects, plans and budgets to ensure that County-wide or departmental requirements are met in accordance with project scope, deadlines, cost, quality expectations and other critical success factors. Incumbents possess extensive knowledge GIS technology and apply advanced methodologies, principles, and concepts to coordinate major projects. Work requires the use of significant judgment and ingenuity in developing plans and originating approaches to meet project objectives and is reviewed for overall feasibility and cost effectiveness in achieving expected results.

Positions in this class differ from those in the class of GIS Section Manager in that GIS Section Managers are responsible for supervising and managing the work of a GIS section. Duties involve carrying out a wide range of professional responsibilities under administrative direction in terms of County and/or departmental business objectives, policies and cost/budget parameters.

Positions in this class differ from those in the lower level class of Principal GIS Analyst in that incumbents in the class of Principal GIS Analyst independently perform complex duties focused on large-scale GIS application and database projects and highly complex analytical assignments to meet departmental/County-wide business, information and decision-support requirements. Completed work is reviewed primarily for general acceptability, feasibility and relevance in meeting County or departmental needs.

EXAMPLES OF DUTIES:

ESSENTIAL DUTIES:

Meets with customers to analyze business and operational processes; develops clearly articulated business and functional requirements and creates design for GIS technology solutions.

Develops specifications; defines data requirements, data sources and design logic; leads and participates in research and evaluation of alternative methods and approaches.

Designs and develops county-wide cartographic standards for use by lower level and County-wide GIS staff.

Recommends appropriate solutions and implementation strategies based on needs, requirements and resources and ensures consideration of best practices in the development of conceptual proposals for technology solutions.

Working with project/team members, designs, develops, configures, tests, implements and maintains large-scale GIS applications and web portals, backend processing modules and associated data layers and databases.

Using standard project management methodologies, tools and techniques, provides project and technical leadership in: defining project objectives, scope of work, budget/cost breakdowns, schedules and critical path/project milestones; estimates team resource requirements; assigns, monitors and manages the completion of project tasks to meet time, quality and cost expectations.

Manages project change control processes; reviews project deliverables and ensures sound quality assurance processes are followed.

Meets with internal and external customers to communicate project status and to resolve development/implementation problems and bottlenecks; facilitates and participates in the resolution of complex technical issues; prepares reports on project progress, identified technical problems or budget/cost change issues.

Analyzes, develops, implements and maintains processes for enhancing the utilization of GIS technologies and solutions to support department/County business requirements and GIS initiatives.

Participates in preparing and evaluating requests for proposals, bids, contracts and service agreements for GIS software, equipment and consulting services; may administer contracts.

Participates in performing complex technical work associated with projects; researches alternatives and recommends appropriate, cost effective technology solutions for the architecture and design of large-scale GIS applications and databases.

Participates in the design, development, integration and maintenance of GIS database architectures, data layers and databases; conducts and resolves complex data validity issues; manages the creation and maintenance of enterprise GIS data repositories.

May serve as a project leader for complex GIS development and maintenance projects; monitors and reports on progress; meets with internal and external customers to review project status and resolve development/implementation issues.

Manages highly complex analytical projects, including spatial and other analyses and forecast modeling; writes reports and prepares complex maps and other GIS products.

Performs highly complex analytical projects with departmental and county-wide scope, and develops analytical framework for lower level staff to follow.

Creates, edits, and imports complex, interrelated spatial data to create and maintain enterprise GIS data repositories.

Develops geospatial data structures to model complex, interrelated geographic features that are used by lower level staff to create and maintain enterprise GIS data.

Performs application, database and system administration functions; establishes security protocols and privileges; monitors and tunes database performance; establishes and maintains database backup and recovery processes; monitors server performance and utilization.

Writes complex queries and scripts to automate highly complex tasks; identifies database discrepancies and automates routines to make corrections to improve database quality.

Participates in research and evaluation of new and emerging GIS and data management technologies to evaluate their potential and compatibility with County GIS needs and technology environment; analyzes and evaluates technology solutions to ensure their consistency and integration with County technology standards; participates in developing enterprise GIS policies, standards and procedures.

Guides and mentors other GIS professionals; develops training materials and conducts training for GIS professionals and users; serves as an expert resource for other professionals.

Reviews cartographic products and geographic analyses by lower level staff to ensure accuracy and completeness.

MINIMUM REQUIREMENTS:

TRAINING AND EXPERIENCE:

Option 1

Two years of experience at the level of Principal Geographic Information Systems Analyst performing complex GIS application and database projects and analytical assignments to meet departmental/ County-wide business, information and decision-support requirements.

Option 2

A Bachelor's degree from an accredited college or university with a major in geographic information systems, GIScience, geography or a closely related field that required equivalent coursework in geographic information systems - AND - seven years of experience in the uses and operations of geographic information systems, including at least two years of experience performing complex GIS application and database projects and highly complex analytical assignments to meet broad scale business, information and decision-support requirements. An advanced degree in geographic information systems, GIScience, geography or a closely related field that required equivalent coursework in geographic information systems may be substituted for two years of the required experience.

LICENSE:

A valid California Class C Driver License or the ability to utilize an alternative method of transportation when needed to carry out job-related essential functions.

PHYSICAL CLASS:

2 - Light.

Positions within this class require light physical effort that may include occasional light lifting to a 10 pound limit and some bending, stooping, or squatting. Considerable walking may be involved.